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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,004	02/22/2002	Daniel F. Baldwin	70257/40535RE-C	4416
21874	7590	07/19/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205				HECKENBERG JR, DONALD H
ART UNIT		PAPER NUMBER		
		1722		

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/082,004	BALDWIN ET AL.
	Examiner Donald Heckenberg	Art Unit 1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 2-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 2-47 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 February 2002 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_.

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1. The patent sought to be reissued by this application, as well as the reissue from which the instant application claims priority, are involved in litigation. Any documents and/or materials which would be material to the patentability of this reissue application are required to be made of record in reply to this action.

Due to the related litigation status of this application, EXTENSIONS OF TIME UNDER THE PROVISIONS OF 37 CFR 1.136(a) WILL NOT BE PERMITTED DURING THE PROSECUTION OF THIS APPLICATION.

2. This application is objected to under 37 CFR 1.172(a) as lacking the written consent of all assignees owning an undivided interest in the patent. The consent of the assignee must be in compliance with 37 CFR 1.172. Note, the copy of a consent from the parent reissue application which was filed with the instant application is not sufficient for this continuation application. See MPEP 1410.01 (noting the copy of an assent for a continuation reissue in which the parent reissue has not been abandoned is unacceptable).

A proper assent of the assignee in compliance with 37 CFR 1.172 and 3.73 is required in reply to this Office Action.

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3. The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414. Note, the copy of the reissue declaration from the parent reissue application which was filed with the instant application is not sufficient for this continuation application. See MPEP 1451(II) (noting that in a continuation reissue application a copy of the oath/declaration from the parent reissue application is not acceptable when the parent reissue has not been abandon).

4. The first line of the specification does not contain a reference to U.S. Pat. App. 08/692,060, now U.S. Pat. Re. 37,932, to which the instant application claims priority. The specification must contain such a reference. Appropriate correction is required. It is suggested that Applicant use language described in MPEP 1451 in amending the continuity data at the beginning of the specification, that is, as such to read along the lines: "More than one reissue application has been filed for the reissue of U.S. Pat. No. 5,334,356. The reissue applications are U.S. App. No. 08/692,060, now U.S. Re. 37,932, and U.S. Pat. App. 10/082,004 (the present reissue)."

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5. The Information Disclosure Statement (I.D.S.) filed 23 July 2002 cites U.S. Pat. No. 4,628,559. The I.D.S. indicates this patent is to Hardenbrook et al. This patent, however, was in fact issued to Funck, and the I.D.S. has so been edited. It is suggested that Applicant checked their records to ensure that the correct patent number was indicated on the I.D.S.

6. Claims 2-47 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175. The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 26-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably

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convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 26 and 27 both recite a nucleator being associated with the system capable of nucleating the product "in the absence of an auxiliary nucleating agent." Any negative limitation or exclusionary proviso, such as this, must have a basis in the original disclosure. Ex parte Grasselli, 231 USPQ 393 (Bd. App. 1983). The mere absence of a positive recitation is not basis for an exclusion. MPEP 2173.05(i). The originally filed disclosure did not contain any express recitation to the nucleator being capable of operating in the absence of an auxiliary nucleating agent.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 2-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The preliminary amendment filed 18 July 2002 instructs to cancel claim 1. Claims 2-7, which depend from claim 1, remain pending in the application. As such, these claims are indefinite and incomprehensible- there is no base claim to evaluate these elements with.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 26-35, 37 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kiczek et al. (U.S. Pat. No. 5,034,171).

Initially it is noted that the claims of the instant application are drawn to "a system." A system in and of itself is not a recognized claim type. See 35 U.S.C. 101 (allowing patents for process, machine, manufacture, or compositions of matter). The claims appear to most predominantly present

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machine or apparatus type structures. As such, the claims of the application have been examined according to the ordinary rules of apparatus-machine claim interpretation.

Kiczel discloses an apparatus and process for extruding thermoplastic to produce foamed materials. The apparatus includes an extruder having an inlet (4) for receiving a precursor of a foamed material at an inlet end (see Fig.). An outlet is provided for the extruder for releasing the material from the extruder (see Fig.). As such, the extruder has an enclosed passageway/barrel (1) connecting the inlet with the outlet. An orifice (13) is provided between the inlet and the outlet, with the orifice fluidly connectable with a source of a blowing/foaming agent (col. 7, ll. 59-64). The orifice is within the vicinity of a mixing section of a polymer processing screw mounted in the barrel of the extruder (see Fig.). A nucleator in the form of sheet die (6) is associated with the passageway as such that the pressure drop from the extruder to the die causes nucleation and expansion of the blowing/foaming agent, and thereby the foamed material (see col. 8, ll. 8-16).

As noted above, the claims of the instant application have been interpreted as presenting an apparatus. The claims contain further recitations as to how the apparatus is being used and operated. For example, claim 26 recites the use of a

supercritical fluid admixed with the molten material, and further that no auxiliary nucleating agent is used with the material. As a further example, claims 28-31 recite specific blowing agents. It is well settled, however, that the intended use and operation of an apparatus is not germane to the issue of patentability of the apparatus. If the prior art structure is capable of performing the claimed use, then it meets the claim limitations. In re Casey, 370 F.2d 576, 580, 152 USPQ 235, 238 (CCPA 1967); In re Otto, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963); MPEP 2115. Moreover, expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining the patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Still further, inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. In re Young, 75 F.2d 996, 25 USPQ 69 (CCPA 1935); MPEP § 2115. Instead, the apparatus must be distinguished from the prior art in terms of structure rather than its function or the manner in which it operates. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); Ex parte Masham, 2 USPQ2d 1647 (Bd. App. 1987); MPEP 2114.

As described above Kiczek discloses an apparatus with all of the structural features recited in the claims of the instant

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application. Further, Kiczek's apparatus is capable be used in the manner recited in the claims, such as being used with a supercritical fluid as the blowing agent. Note for example, carbon dioxide is a possible blowing agent for use with the apparatus, and the blowing agents supplied may be at pressures from 200 to about 2,500 psi (col. 6, ll. 4 and 5, col. 6, ll. 18-20). As such, Kiczek anticipates the apparatus structure recited in the claims of the instant application, regardless of the precise uses defined in the claims.

13. Claims 26-34 and 36-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendry (U.S. Pat. No. 4,389,358).

Hendry discloses a method and apparatus for making an integral structural cellular and non-cellular plastic. The apparatus comprises an extruder (30). The extruder has an enclosed passageway connecting an inlet (32) designed to receive a precursor of foamed material and an outlet (110) designed to release the processed material (see Fig. 1). An orifice (86) is provided between the inlet and outlet fluidly connectable to a source of a blowing agent that is to be mixed with the molding material (col. 5, ll. 37-54). The passageway includes a downstream section which receives the mixed molding material and blowing agent. The apparatus further comprises a molding chamber

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(70 and 72) connected to the outlet end to receive the processed material (see Fig. 1).

As described above in the rejection in view of Kiczek, the claims of the instant application have been interpreted as defining an apparatus structure. Thus, as further described above, recitations of uses and operating processes of the claimed apparatus are not germane to issue of patentability of the claims. Claims 26-34 and 35-47 define several such uses and operations, such as passageway creating a nucleated solution of polymeric material and the blowing agent (cl. 39). In this case, Hendry discloses an apparatus with all of the actual structure recited in these claims. Further, the apparatus is capable of operating with the recited uses and process. Note for example, the downstream portion (42) of the enclosed passage is capable of acting nucleator with particular molding materials and operating pressures. As such, Hendry anticipates the claims, regardless of the specifically defined uses and operating manner of the claims.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 8-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-209120 (hereinafter "JP '120") in view of Hardenbrook et al. (U.S. Pat. No. 4,761,256; previously made of record in the I.D.S. filed by Applicant). English abstracts for JP '120 are also made of record with this Office Action.

Claims 8-19 recite several elements in means plus function form. These elements have been interpreted as invoking 35 U.S.C. 112, sixth paragraph, and thereby limited to the corresponding structure described in the specification and equivalents thereof. In re Donaldson, 16 F.3d 1189, 1194, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994); MPEP 2181. The means recited in claims 8-13 have been interpreted as follows:

- "means connected to [the] extrusion means for supplying material" (cl. 8, ll. 6 and 7; cl. 14, ll. 6 and 7) is a hopper and equivalents thereof (see for example, specification at p. 4, col. 1, ll. 29-32)

- "means for heating [the] extrusion means" (cl. 8, ll. 8-10; cl. 14, ll. 8-10) are heaters and equivalents thereof (see for example, specification at p. 4, col. 1, ll. 29 and 30)

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- "means connected to [the] extrusion means for supplying supercritical fluid" (cl. 8, ll. 11-20; cl. 14, ll. 11-19) is a gas supply and compressor combination, and equivalents thereof (see for example specification at p. 4, col. 1, ll. 40-47)

- "means for engaging and transporting [the] shaped continuous material" (cl. 8, ll. 21-25; cl. 14, ll. 20-27) is a roller arrangement and equivalents thereof (see for example specification at p. 4, col. 1, ll. 34-39; p. 4, col. 2, ll. 27-29; p. 4, col. 2, ll. 56-58)

- "means for maintaining the temperature" (cl. 8, ll. 26-29) are heaters and equivalents thereof (see for example specification at p. 4, col. 1, l. 67 - p. 4, col. 2, l. 2)

- "means for controlling the position of at least one of [the] rollers" (cl. 11, ll. 3-6; cl. 12, ll. 6-9; cl. 17, ll. 1-6;) are a mechanism that changes the position, and thus length, of the rollers and equivalents thereof (see for example, specification at p. 4, col. 1, ll. 62-67)

- "means for engaging [the] continuous sheet of foamed material for annealing [the] continuous sheet of foamed material (cl. 13, ll. 1-4; cl. 19, ll. 1-4) are heaters and rollers and equivalents thereof (see for example, specification at p. 4, col. 2, ll. 3-11)

Claim 8 recites an "extrusion means" (l. 3), a "die means" (l. 4) and a "foam heating means comprising heaters" (ll. 30-35), and claim 14 recites similar elements. These elements have been interpreted as not invoking 35 U.S.C. 112, sixth paragraph, as the claims define specific structure for performing the functions associated with these elements, i.e.: an extruder, a die, and heaters. Additionally, the "means for reducing the pressure and the temperature of the shaped continuous material" has not been interpreted as invoking 35 U.S.C. 112, sixth paragraph because the disclosed mechanism for doing so is recited in the claim: specifically, the continuous shaped material exiting the higher pressured and temperature enclosed volume to a space with less temperature and pressure (cl. 14, ll. 29 and 30).

JP '120 discloses an apparatus for forming a foamed sheet of polystyrene. The apparatus comprises an extruder (9) with a hopper for supplying material to the extruder (see Fig. 1). The extruder inherently must have heaters in order to maintain the shaping material in a plastic state during processing (see English Abstract). The extruder is connected with a source of pressurized gas (1) and a compressor (4) for the purpose of supplying the gas as a blowing agent to the material to be foamed (see English Abstract).

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JP '120 does not disclose the processing of the shaped material to be foamed upon exiting of the extruder. Structures for such processing, however, are widely known in the art. Hardenbrook, for example, discloses a known post extruder processing structure for a foamed material. The structure includes a sheet die (16) and a plurality of rollers for engaging and transporting the shaping material through an enclosed volume (43) in which temperature and pressure are controlled so as to induce foaming. Within the enclosed volume, rollers (47) are moveable to different position to change the length, and thus time, the material is within the volume (cl. 6, ll. 26-32). The material upon exiting the enclosed volume is then transported by chill rollers (53) to complete the processing (see col. 4, ll. 16-49). Hardenbrook notes that the arrangement induces and allows for controlled foaming of the material being processed (col. 6, ll. 16-20; col. 6, ll. 32-36).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus disclosed by JP '120 as such to have further included a sheet die, an enclosed volume wherein temperature and pressure are controlled and through which the material is transported with moveable rollers, as well as chill rollers because such structures are known in the art for the processing of material

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upon exiting of the extruder as such to induce controlled foaming and ultimately produce the shaped foamed article as suggested by Hardenbrook.

As described above in the rejection in view of Kiczek, the claims of the instant application have been interpreted as defining an apparatus structure. Thus, as further described above, recitations of uses and operating processes of the claimed apparatus are not germane to issue of patentability of the claims. Claims 8-19 define several such uses and operations. In this case, the combination of JP '120 and Hardenbrook suggest an apparatus with all of the actual structure recited in these claims. Further, the apparatus is capable of operating with the recited uses and process. As such, combination of JP '120 and Hardenbrook render obvious the claims, regardless of the specifically defined uses and operating manner of the claims.

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting

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rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claims because the examined application claim is either anticipated by, or would have been obvious over, the reference claims. See In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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19. Claims 26-47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 26-33, 37, 39, 40, 42, 43, 50-54, and 56-62 of U.S. Re. No. 37,932 (hereinafter "Re '932"). Although the conflicting claims are not identical, they are not patentably distinct from each other.

With respect to claim 26 of the instant application, claim 43 of Re '932 fully anticipates claim 26. That is, claim 43 of Re '932 includes all of the features recited in claim 26 of the instant application. Further, claims 26 and 54 of Re '932 disclose all of the features recited in claim 26 except for the absence of an auxiliary nucleating agent. The use of a nucleating agent, however, is related only to the intended use and operating manner of the claimed system-apparatus claims of the instant application. As described above, such a limitation is not germane to the issue of patentability. As such, claims 26 and 54 of Re '932 fully anticipate claim 26 of the instant application as well..

With respect to claims 27-34, 36, and 38 of the instant application, claims 43, 50, 52-54 and 56-58 of Re '932 define a system with all of the features recited in claims 27-34, 36, and 38, with the exception of limiting the blowing/foaming agent to being "essentially entirely" a supercritical fluid. However,

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the use of a supercritical fluid, and therefore further "essentially entirely" a supercritical fluid, is related only to the intended use and operating manner of the claimed system-apparatus claims of the instant application. As described above, this limitation is not germane to the issue of patentability of the apparatus claims of the instant application. As such, claims 43, 50, 52-54 and 56-58 of Re '932 fully anticipate claims 27-34, 36, and 38 of the instant application as well.

Similarly, claims 26, 35, 59, and 60 of Re '932 define a system with all of the features recited in claims 27, 32, 33, 35, 37 and 38 of the instant application, except for the absence of an auxiliary nucleating agent. The use of a nucleating agent, however, is related only to the intended use and operating manner of the claimed system-apparatus claims of the instant application. As described above, this limitation is not germane to the issue of patentability of the apparatus claims of the instant application. As such, claims 26, 35, 59, and 60 of Re '932 fully anticipate claims 27, 32, 33, 35, 37 and 38 of the instant application as well.

With respect of claims 39-47 of the instant application, claims 43, 50, 51, and 58 of Re '932 define a system with all of the features recited in claims 39-47 with the exception of the

passageway being arranged to form a single-phase solution of the blowing agent and polymeric material. The formation of a single-phase solution, however, is related only to the intended use and operating manner of the claimed system-apparatus claims of the instant application. As described above, this limitation is not germane to the issue of patentability of the apparatus claims of the instant application. As such, claims 43, 50, 51, and 58 of Re '932 fully anticipate claims 39-47 of the instant application as well.

20. Claims 20-25 are allowable over the prior art of record. Note, however, the rejection of these claims based on the defective declaration as described above.

21. The following is a statement of reasons for the indication of allowable subject matter:

Initially, it is noted that claims 20 and 24 define several means plus function elements, thereby invoking the provisions of 35 U.S.C. 112, sixth paragraph, as described above.

Specifically these elements have been interpreted as follows:

- "means for supplying a material" (cl. 20, ll. 6 and 7) as well as "means for introducing a material" (cl. 24, ll. 7-9) is

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a hopper and equivalents thereof (see for example, specification at p. 4, col. 1, ll. 29-32)

- "means for heating [the] extrusion means" (cl. 20, ll. 8 and 9) as well as "means for heating [the] barrel" (cl. 24, ll. 10 and 11) is a heater and equivalents thereof (see for example, specification at p. 4, col. 1, ll. 29 and 30)

- "means connected to [the] extrusion means for supplying a supercritical fluid" (cl. 20, ll. 11-19; cl. 24, ll. 12-17) is a gas supply and compressor and equivalents thereof (see for example specification at p. 4, col. 1, ll. 40-47)

- "means for engaging and transporting [the] shaped continuous material" (cl. 20, ll. 20-29): is a roller arrangement and equivalents thereof (see for example specification at p. 4, col. 1, ll. 34-39; p. 4, col. 2, ll. 27-29; p. 4, col. 2, ll. 56-58)

- "means for engaging [the] shaped continuous material as it exits from [the] first enclosed volume" (cl. 20. ll. 30-37) is a roller arrangement and equivalents thereof (see for example specification at p. 4, col. 1, ll. 48-62)

- "means for rapidly heating [the] solution" (cl. 24, ll. 29-32): is a heated section of the diffusion chamber and equivalents thereof (see for example specification at p. 6, col. 1, ll. 53-61)

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- "means for receiving [the] solution" (cl. 24, ll. 33-35)  
is a mold and equivalents thereof (see for example specification  
at p. 6, col. 1, l. 66 - p. 6, col. 2, l. 2)

The prior art of record fails to teach or suggest a system  
for producing a foamed material as recited in claims 20 and 24.  
The closest prior art is described above. None of these prior  
art references teach or suggest a second enclosed volume in  
combination with the other features as recited in claim 20.  
Further, none of the prior art references teach or suggest a  
means for rapidly heating solution within the diffusion chamber  
as recited in claim 21.

22. Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Donald  
Heckenberg whose telephone number is (571) 272-1131. The  
examiner can normally be reached on Monday through Friday from  
9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are  
unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta, can  
be reached at (571) 272-1316. The official fax phone number for  
the organization where this application or proceeding is  
assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



4-19-6  
Donald Heckenberg  
Primary Examiner  
A.U. 1722